



# **INTRODUCTION TO THE 2008 CALIFORNIA & REGIONAL ECONOMIC PROFILES**



**AUGUST 2008**



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## PREFACE

The California Economic Strategy Panel (Panel) continuously examines changes in the state's economic base and industry sectors to develop a statewide vision and strategic initiatives to guide public policy decisions for economic growth and competitiveness (see [www.labor.ca.gov/panel/](http://www.labor.ca.gov/panel/)). The fifteen-member Panel is comprised of eight appointees by the Governor, two appointees each by the President pro Tempore and the Speaker and one each by the Senate and Assembly Minority Floor Leaders. The Secretary of the California Labor & Workforce Development Agency serves as the Chair.

The Panel first identified California's economy as an economy of regions in 1996. At that time, the Panel also adopted a new way of looking at industry sectors and how they function and grow as industry clusters. These new ways of looking at the economy became the basis for the analytical work completed then, and have provided a foundation for the Panel's work since that time.

The California Regional Economies Project is currently the lead research mechanism for the Panel to identify economic policy issues. The project provides the state's economic and workforce development systems with data and information about changing regional economies and labor markets. The information provides a new resource in economic and workforce development planning and investment decisions and a bridge connecting economic and workforce policies and programs at the state and regional levels.

In order to understand the state's economy and the changes taking place within industry sectors and industry clusters, it is important to recognize the regional nature of the economy and to analyze the economic base by region. To do this, the statewide and nine regional economic base reports analyze the patterns of employment, business establishments, wages, population, unemployment rate and other key factors.

The 2008 Economic Profiles cover the period 2001-2006, with snapshots of employment changes in 2007 and early 2008; however, they do not cover the most recent, dynamic changes taking place in the economy, due to lag time in data availability at the detailed level used in our analyses. The most current monthly trends for California are available from the Labor Market Information Division of the Employment Development Department, at [www.labormarketinfo.edd.ca.gov/?pageid=1003](http://www.labormarketinfo.edd.ca.gov/?pageid=1003).

These profiles provide updates to the Profiles released in 2007, highlighting significant changes and key industry sectors and clusters in each region. They are briefer than past profiles and use a different format, in an effort to make the information easier to read and faster to digest. The 2008 Profiles also add a new cluster, Housing, as we track activity in residential construction and related industries.

Previous economic base reports examined the 1990-2002, 2001-2004 and 2001-2005 periods. The earlier reports were the first economic base reports for the regional economies as they are defined today. The Panel's initial work, from 1994-1996, resulted in identification of six regions and provided regional economic base analyses; however, those regions were

significantly redefined by 1998 into nine regions, making comparisons to the early analyses impractical.

The source of the data used for these reports is the official employment and wage information reported by employers to the State. While a variety of other sources provide similar information, they may not capture the official numbers that employers report, or may not include input from all employers. This data source is the most comprehensive and accurate source of information direct from employers, and is therefore the best to use for public policy-making, planning and program administration.

The Panel has taken steps to institutionalize the analysis and preparation of these economic base reports within State government so that this analysis may be provided on a yearly basis. Also, steps have been taken to leverage the body of knowledge that now exists around the study of industry clusters, gained through the California Regional Economies Project.

First, a non-confidential version of the data series, the *California Regional Economies Employment Series*, has been made available online by the California Employment Development Department's Labor Market Information Division (LMID) so that regional organizations may access this data at the county level. Second, a step-by-step guide, the *Industry Clusters of Opportunity User Guide*, is available online so that regional organizations can conduct industry cluster studies and work with business and industry to test and apply the findings. With this information, regional organizations may conduct their own economic base and industry cluster analyses down to the county level, and they may combine county data to create their own sub-regional study areas. Training workshops are being held to teach the methodology and processes outlined in the *Industry Clusters of Opportunity User Guide* to representatives from Local Workforce Investment Boards, economic development organizations, the Employment Training Panel, LMID, educational institutions and programs including Community Colleges and Regional Occupational Programs, and other local jurisdictions.

The statewide and regional economic profiles, the *Industry Clusters of Opportunity User Guide* and other studies are available on the Panel's website at [www.labor.ca.gov/panel/espcrep.htm](http://www.labor.ca.gov/panel/espcrep.htm).

The *California Regional Economies Employment Series* is available online at [www.labormarketinfo.edd.ca.gov/cgi/databrowsing/?PageID=173](http://www.labormarketinfo.edd.ca.gov/cgi/databrowsing/?PageID=173).

The California Regional Economies Project is sponsored by the California Labor & Workforce Development Agency, California Employment Development Department, California Workforce Investment Board and the California Community Colleges Chancellor's Office.

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## HISTORICAL CONTEXT AND DEVELOPMENT OF THE METHODOLOGY

### PAST AND PRESENT

The California Regional Economies Project provides data and information about changing regional economies and labor markets. The information provides a new resource in economic and workforce development planning and investment decisions, and a bridge connecting economic and workforce policies and programs at the state and regional levels.

In order to understand the state's economy and the changes taking place within industry sectors and industry clusters, it is important to recognize the regional nature of the economy and to analyze the economic base by region. To do this, the statewide and nine regional economic base reports analyze the patterns of employment, business establishments, wages, population, unemployment rate and other key factors.

The California Workforce Investment Board (State Board) sponsored the project, to help address its own need for timely information about the economy and key labor and workforce issues that would drive investment decisions by the State Board and by the Local Workforce Investment Boards and their service delivery system of One-Stop Career Centers. At a time when the federally-funded system was being called to become more responsive to the changes taking place in the economy, the Project would provide important information and would help to create a bridge for dialogue and collaboration between the economic and workforce development worlds.

The first phase of the California Regional Economies Project was completed in 2004. In addition to the economic base reports, the studies looked at key industry clusters and how they are changing or transforming. These included the health sciences and services cluster, the manufacturing cluster (design, production and logistics), and a newly evolving rural economic cluster around quality of life and quality of place experiences. The monographs discussed critical issues to California; workforce transition, conditions of economic competitiveness, and innovation's impact on productivity and economic prosperity.

A second phase was completed in 2005, which provided three additional studies, and produced a training guide, the *Clusters of Opportunity User Guide*, and workshops to teach others the methodology behind the Project's work. The 2005 studies included an in-depth look at the logistics component of the manufacturing cluster, entrepreneurship's important role in rural economies, and the impact of immigration on the state's economy. The training guide and workshops provided a first step toward institutionalizing this approach to economic analysis at the regional and local level, providing local and regional organizations with the tools needed to complete their own analyses.

In the 2006 phase, the Project provided two additional industry cluster studies and additional training sessions, and took the first steps to institutionalize production of the economic base analysis within State government. The first of the two 2006 studies examines the agricultural sector, considering the larger cluster involved in food production, processing, distribution, and

support. The second study looks at California's infrastructure industry cluster, from planning and design to construction.

Currently, two additional studies entitled, *Clean Technology and the Green Economy: Growing Products, Services, Businesses and Jobs in California's Value Network* and *Global Economic Integration* are being completed.

Also, in 2007, the California Community Colleges Chancellor's Office sponsored six training workshops; and, in 2008, the California Workforce Investment Board, in partnership with the California Community Colleges, is sponsoring more workshops in 2008. The *Clusters of Opportunity User Guide* is updated as needed for these workshops.

Last, the *California Economic Profiles: 2008 Series* has been completed. The 2008 Profiles highlight significant changes in employment taking place by sector and region, pointing out low and high points since the 2001 recession. Particular attention is paid to industry sectors and industry clusters historically important to each region, to emerging industries, and also to industries related to housing, in an effort to see the impact of the current housing downturn.

All products, including the economic profiles, monographs, studies and *Clusters of Opportunity User Guide*, are available at [www.labor.ca.gov/panel](http://www.labor.ca.gov/panel).

## **METHODOLOGY FOR THE ECONOMIC PROFILES**

The original economic base reports by the Project were produced in 2004. They looked at the period of 1990 – 2002. The updates produced in 2006 looked at the period of 2001 – 2004. Since then, annual updates are prepared each year to include the most current year of new data available. The current reports look at the period of 2001 – 2006. (The most current data available at the time of this series was the 2006 data.)

### **Data Sources**

Both the original and current economic base reports use confidential employer data, which cannot be released to the public. Non-confidential versions have been made available online, as noted below. There is more than one source of data for employment statistics. The original and current economic base reports used different sources.

The first economic base reports used customized employer data from the Current Employment Statistics (CES) data. The Labor Market Information Division (LMID) of the California Employment Development Department (EDD) prepared the data for the analyses. At the time, the new North American Industry Classification System (NAICS) was very new, and not all years of employer data were available using the new coding system. Most years of data still used the Standard Industry Classification (SIC) coding system; only the most recent years of data used the NAICS coding system. LMID staff manually converted the federal CES data from SIC into NAICS back to 1990. A non-confidential version of this data was made available online at the county level.

The current reports use Quarterly Census of Employment and Wages (QCEW) data for the private industry data, which uses the NAICS coding system. This is a relatively new source of employer data. Since the original economic base reports were completed, the federal Bureau of Labor Statistics has converted prior years of data from SIC to NAICS. This eliminated the need to have the LMID staff manually convert data. Instead, LMID staff prepared the data sets from the confidential federal QCEW data. The federal non-confidential QCEW data is available to the public at the BLS website. (Confidential data includes information that could allow the user to identify a specific firm; the government has an agreement with the employers that such information will not be released to the public.) The LMID staff also prepares and maintains non-confidential versions of the project data sets, by county, the [California Regional Economies Employment Series](#), which is available online.

The differences in the data sources mean that there may be slight discrepancies in the data and findings from the first set of economic base reports when compared to the data and findings in the more recent reports. Some differences may be explained by the change from manually converted data to the federally converted data; others may be due to changing from CES to QCEW.

The QCEW data provides summary data by NAICS code, including number of establishments, number of employees, and total annual wages. Individual employers report this information, which is taken and summed by NAICS code. The establishment and employment numbers are simple totals; the average wage rate is calculated by taking the total annual wages and dividing by the total employment.

The QCEW is an important data source for the economic base reports and industry cluster studies that will inform public policy-making, planning and program administration. The QCEW data capture the official employment and wage information reported by employers to the State. While a variety of other sources provide similar information, they may not capture the official numbers that employers report, or may not include input from all employers. This data source is the most comprehensive and accurate source of information direct from employers.

The CES data is still used for all levels of government employment data. While some data are required to be suppressed, LMID recommends using CES as the data source for the government data as they feel it is overall the most accurate and complete for the purpose of this report. The CES data does not offer wage information, so the government wage information in this report was taken from the federal Bureau of Labor Statistics (BLS) QCEW non-confidential data available online.

Steps have been taken to share and leverage the body of knowledge that now exists around the study of industry clusters gained through the Project. In addition to making available the [California Regional Economies Employment Series](#), a step-by-step guide, the [Clusters of Opportunity User Guide](#), was published online that teaches the Project methodology for conducting industry cluster studies. Training workshops have been held to teach the methodology and processes outlined in the [Clusters of Opportunity User Guide](#) to representatives from the Local Workforce Investment Boards, economic development organizations, LMID, California Community Colleges, California Employment Training Panel, California State University system, local K-12 education entities and programs including the Regional Occupational Programs, and local governments.



## **Industry Clusters versus Sectors**

Outside of the original economic base reports, much of the Panel's work looks at industry clusters, rather than industry sectors. An industry sector is a group of firms that are doing the same type of work, making the same type of products, or providing the same types of services. Examples include manufacturing, construction, retail trade and health care.

An industry cluster is a group of interdependent industry sectors characterized by competing firms and buyer-supplier relationships, as well as shared labor pools and other specialized infrastructure. They are also geographically concentrated. When identifying "industry clusters of opportunity," the Project adds additional considerations that focus on employment opportunities for regional residents.

## **Definition of the Economic Base Industries**

Economists divide industries into two groups; export-oriented and local-serving (also referred to as population-driven). Export-oriented industries are industries that sell a large portion of their goods and services to people and businesses in markets outside of the region, creating capital (bringing capital into) the region. Examples of export-oriented industries include manufacturing; wholesale trade; tourism; and, professional, scientific & technical services. Many service industries are included, as most professional, technical and scientific service firms sell to worldwide markets. Local-serving industries are industries that sell their goods and services to people and businesses in markets within the region. These industries do not typically create new capital for the region, but recirculate it within the region. Examples of local-serving industries include health care and retail trade.

In the first economic base reports completed in 2004, the two principal researchers who provided the analyses did not agree on a common definition of an area's economic base. Specifically, they did not agree on the types of industries that should be included. One applied the traditional approach, which says that only export-oriented industries should be considered the economic base. This approach was applied to the urban regions.

The other approach analyzed the rural regions, and found that there were key local-serving industries that were also starting to sell more of their products and services to people outside of the local area (out of the region). There were also other local-serving industries that were as critical to rural regions as the export-oriented industries, if not more so. Due to transformations taking place in the industries and/or rural regions, it was felt this warranted their inclusion in the economic base.

For the economic base reports completed in 2006, we chose to include some industries in our definition of the economic base that are not traditionally included. We acknowledged that this use of the term, "economic base," conflicted with the standard definition, and that we chose to redefine it for the purpose of those reports.

The reports completed in 2007 took another step to reconcile past methodological differences, which is again used in the reports released in 2008. After first presenting findings for the

economy as a whole, the reports present an analysis of the traditional economic base (as defined in the economic base reports produced in 2004 for the urban regions), which includes only export-oriented industries. Then, in an expanded view of the economic base, the reports present an in-depth analysis of other key industries and industry clusters that are also important to the region's economy, whether or not traditionally considered a part of the base and/or export-oriented. (This draws from the reasoning behind the expanded definitions of the economic base used in the economic base reports produced in 2004 for the rural regions, and other past reports.) We do this in order to incorporate the traditional approach in a meaningful way for those who prefer that approach, while recognizing the importance of seeking alternative ways to view the economy. Definitions by NAICS code classification for the economic base industries and for the industry clusters are provided in a separate document.

### **Counting Jobs in Manufacturing and Other Industries**

Manufacturing is a cornerstone of the economy. Changes in employment within Manufacturing are closely monitored. Therefore, it is important to note that the employment counts reported for Manufacturing may be impacted by two key factors.

First, some Manufacturing firms may report all of their employment in a given location as manufacturing, while not all of the work actually being done at that location is manufacturing. Firms are encouraged to report employment under multiple industry codes in order to most accurately capture the type of employment; however, this is somewhat at the firm's discretion.

Second, there is a growing percentage of manufacturing jobs being filled by the Employment Services industry,\* suggesting that Manufacturing firms are relying more heavily on the use of temporary workers. These workers are reported as employees of the Employment Services firm, thus affecting the count of manufacturing jobs.

These facts are true for other industries, as well, and should be taken into consideration whenever analyzing employment data.

\* US Department of Labor, Bureau of Labor Statistics, *Career Guide to Industries: Employment Services*

## THE ECONOMIC REGIONS

California is an economy of diverse regions. Each region has different industries, infrastructures and workforces. The Panel established the regional boundaries based on similarities in counties' economic, demographic and geographic characteristics, taking into consideration such factors as metropolitan area boundaries, population centers, industrial composition, and commute patterns. In general, the degree of similarity in characteristics among adjacent counties was the basis for establishing regional boundaries.

The Panel has identified nine economic regions in California. Since most economic data are not collected at a more local level than the county, this necessitates defining economic regions as aggregations of counties, even when county boundaries do not precisely define an economic area. From time to time, the Panel revisits the regional composition to see whether changes should be made. This occurred most recently in 2006, when San Benito County was moved into the Bay Area Region, from the Central Coast Region, to match the federal designation of San Benito County as a part of the San Jose Metropolitan Statistical Area.

The Panel has defined the current nine regions to be:

**Northern California:** Del Norte, Humboldt, Lake, Lassen, Mendocino, Modoc, Nevada, Plumas, Sierra, Siskiyou and Trinity Counties

**Northern Sacramento Valley:** Butte, Colusa, Glenn, Shasta and Tehama Counties

**Greater Sacramento:** El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba Counties

**Bay Area:** Alameda, Contra Costa, Marin, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma Counties (San Benito was recently moved from the Central Coast Region to the Bay Area Region, with the federal change that moved San Benito into the San Jose Metropolitan Statistical Area)

**Central Coast:** Monterey, San Luis Obispo and Santa Barbara Counties

**San Joaquin Valley:** Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus and Tulare Counties

**Central Sierra:** Alpine, Amador, Calaveras, Inyo, Mariposa, Mono and Tuolumne Counties

**Southern California:** Los Angeles, Orange, Riverside, San Bernardino and Ventura Counties

**Southern Border:** Imperial and San Diego Counties

The following map delineates the regional boundaries.

# California

## Economic Strategy Panel Regions



## DEFINITION OF THE TRADITIONAL ECONOMIC BASE

The following provides a definition of the traditional economic base industries, selected for the 2008 Economic Profiles, using the North American Industry Classification System (NAICS).

The economic base is traditionally considered to be made up of export-oriented industries in the study area - industries that sell a large portion of their goods or services to people and businesses in markets outside of the area. For the analysis of the traditional economic base, we include the following sectors:

- High Tech Manufacturing
- Diversified Manufacturing
- Wholesale Trade & Transportation
- Professional, Business & Information Services
- Tourism & Entertainment
- Federal Government (Defense & Other Federal Government)
- Resource Based

### High-Tech Manufacturing

NAICS	Industry
3341	Computer & Peripheral Equipment Mfg
3342	Communications Equipment Mfg
3344	Semiconductor & Other Electronic Component Mfg
3345	Navigational, Measuring, Electromedical, & Control Instruments Mfg
3364	Aerospace Product & Parts Manufacturing
3254	Pharmaceutical & Medicine Mfg

### Diversified Manufacturing

NAICS	Sub-sector
321	Wood Product Manufacturing
322	Paper Manufacturing
323	Printing & Support Activities
337	Furniture & Related Product Manufacturing
3391	Medical Equipment & Supplies Manufacturing
315	Apparel Manufacturing
325-3254	Chemical Manufacturing (except Pharma)
326	Plastics & Rubber Products Manufacturing

### Wholesale Trade & Transportation

NAICS	Sub-sector
423	Merchant Wholesalers, Durable Goods
424	Merchant Wholesalers, Nondurable Goods
425	Wholesale Electronics Markets, Agents, Brokers
481	Air Transportation

## **Professional, Business & Information Services**

<b>NAICS</b>	<b>Industry</b>
5411	Legal Services
5412	Accounting, Tax Prep, Bookkeeping & Payroll Services
5413	Architectural & Engineering Services
5415	Computer Systems Design Services
5416	Mgmt, Scientific & Technical Consulting Services
5417	Scientific R & D Services
5511	Mgmt of Companies & Enterprises
5613	Employment Services
5112	Software Publishers
5181	Internet Providers & Web Search Portals
5182	Data Processing & Hosting Services

## **Tourism & Entertainment**

<b>NAICS</b>	<b>Sub-sector/Industry</b>
5121	Motion Picture & Video Industries
5122	Sound Recording Industries
713	Amusement, Gambling & Recreation
721	Accommodation

## **Resource Based**

<b>NAICS</b>	<b>Sub-sector/Industry</b>
11-1133	Farm
1133	Logging
21	Mining
3114	Fruit, Vegetable Preserving & Specialty Food Manufacturing
3116	Animal Slaughtering & Processing
3117	Seafood Product Prep & Packaging
33321	Sawmill & Woodworking Machinery Manufacturing

## DEFINITION OF INDUSTRY CLUSTERS IN THE EXPANDED ECONOMIC BASE

The Panel's definition of the economic base expands beyond the traditional economic base industries to include other industries and industry clusters that are also important to the region. While the traditional economic base includes only export-oriented industries, the expanded economic base may include industries that are considered local-serving, selling most of their goods or services to the population within the study area.

The following includes a brief description and definition by NAICS codes of each of the industry clusters that may be considered a part of the expanded economic base. Each region is unique, so not all of these industry clusters will be included in the current Economic Profile for each region.

### THE FOOD CHAIN

California is a leader in the global Food Chain. Global market forces are transforming California's Food Chain, as local firms become multinational firms and foreign firms produce locally in order to efficiently tailor products for local markets. As globalization has increased competition, it has also brought new opportunities in the form of new products for the state's consumers and new markets for the state's firms. Technology's role has been central as an enabler and driver in these global processes through advances in production, packaging, shipping and communications. Locally, California companies are adopting innovative new processes in order to meet consumers' changing demands, such as the increasing demand for high quality convenience foods and organic products, while remaining competitive.

The Food Chain cluster is composed of four components: Production, Support, Processing and Distribution.

#### Production

NAICS	Industry
1111	Oilseed & Grain Farming
1113	Fruit & Tree Nut Farming
11141	Food Crops Grown Under Cover
11193	Sugarcane Farming
111991	Sugar Beet Farming
111992	Peanut Farming
1112	Vegetable & Melon Farming
111998	All Other Misc. Crop Farming
1121	Cattle Ranching & Farming
1122	Hog & Pig Farming
1123	Poultry & Egg Production
1124	Sheep & Goat Farming
1125	Animal Aquaculture
1129	Other Animal Production
1141	Fishing
1142	Hunting and Trapping

## Support

NAICS	Industry
1151	Support Activities for Crop Production
1152	Support Activities for Animal Production
22131	Water Supply & Irrigation Systems
23711	Water & Sewer Line & Rel. Construction
32192	Wood Container & Pallet Mfg
3253	Pesticide, Fertilizer & Other Ag.Chem.Mfg
33311	Agricultural Implement Mfg
333294	Food Product Machinery Mfg
42382	Farm, Garden Machinery & Equip. Whlsrls
54194	Veterinary Services

## Processing

NAICS	Industry
3111	Animal Food Manufacturing
3112	Grain & Oilseed Milling
3113	Sugar & Confectionery Product Manufacturing
3114	Fruit & Veg. Presrv & Spec. Food Manufacturing
3115	Dairy Product Manufacturing
3116	Animal Slaughtering & Processing
3117	Seafood Product Prep & Packaging
3118	Bakeries & Tortilla Manufacturing
3119	Other Food Manufacturing
322215	Nonfolding Sanitary Food Contnr Manufacturing
32616	Plastics Bottle Manufacturing
327213	Glass Container Manufacturing
332115	Crown and Closure Manufacturing
332431	Metal Can Manufacturing
31211	Soft Drink & Ice Manufacturing
31212	Breweries
31213	Wineries
31214	Distilleries

## Distribution

NAICS	Industry
4244	Grocery & Related Product Wholesalers
4245	Farm Product Raw Material Wholesalers
4248	Beer, Wine, Distilled Alcoholic Beverage Wholesalers
42491	Farm Supplies Merchant Wholesalers
4452	Specialty Food Stores
49313	Farm Product Warehousing & Storage



## MANUFACTURING VALUE CHAIN

California's manufacturing industry has undergone a transformation. While traditional manufacturing (production) jobs have declined since the 1990's, job growth has occurred in the design and logistics (warehousing and delivery) phases of manufacturing. Improvements in production technology have increased production, as measured in gross domestic product, but have reduced the number of production jobs. At the same time, the "just in time" approach to supply and delivery is lowering warehousing costs and has increased the number and types of jobs in logistics.

The California Regional Economies Project calls this industry cluster the Manufacturing Value Chain. Manufacturing industries are important for innovation, high wages and exports. The design and logistics components of manufacturing are providing more middle and higher-level jobs that pay well and offer career development opportunities. By definition, the Manufacturing Value Chain includes some of the manufacturing industries discussed elsewhere in the economic base analysis, under High Tech Manufacturing and Diversified Manufacturing.

The Manufacturing Value Chain includes three components: Design, Production and Logistics.

### Design

NAICS	Industry
5413	Architectural, Engineering & Related Services
5414	Specialized Design Services
5416	Management, Scientific & Technical Consulting Services
5419	Other Prof, Scientific & Tech Services

### Production

NAICS	Industry
3111	Animal Food Manufacturing
3112	Grain & Oilseed Milling
3113	Sugar & Confectionery Product Manufacturing
3114	Fruit & Vegetable Preserving & Specialty Food Manufacturing
3115	Dairy Product Manufacturing
3116	Animal Slaughtering & Processing
3117	Seafood Product Prep & Packaging
3118	Bakeries & Tortilla Manufacturing
3119	Other Food Manufacturing
3121	Beverage Manufacturing
3122	Tobacco Manufacturing
3131	Fiber, Yarn & Thread Mills
3132	Fabric Mills
3133	Textile, Fabric Finishing & Coating Mills
3141	Textile Furnishings Mills
3149	Other Textile Product Mills
3151	Apparel Knitting Mills
3152	Cut & Sew Apparel Manufacturing
3159	Apparel Accessories & Other Apparel Manufacturing
3161	Leather & Hide Tanning & Finishing

3162	Footwear Manufacturing
3169	Other Leather & Allied Product Manufacturing
3211	Sawmills & Wood Preservation
3212	Veneer, Plywood & Eng. Wood Prod. Manufacturing
3219	Other Wood Product Manufacturing
3221	Pulp, Paper & Paperboard Mills
3222	Converted Paper Product Manufacturing
3231	Printing & Related Support Activities
3241	Petroleum & Coal Products Manufacturing
3251	Basic Chemical Manufacturing
3252	Resin, Synthetic Rubber, Artificial Fibers Manufacturing
3253	Pesticide, Fertilizer & Other Agricultural Chemical Manufacturing
3255	Paint, Coating, & Adhesive Manufacturing
3256	Soap, Cleaning Compound, & Toilet Prep Manufacturing
3259	Other Chemical Product & Prep Manufacturing
3261	Plastics Product Manufacturing
3262	Rubber Product Manufacturing
3271	Clay Product & Refractory Manufacturing
3272	Glass & Glass Product Manufacturing
3273	Cement & Concrete Product Manufacturing
3274	Lime & Gypsum Product Manufacturing
3279	Other Nonmetallic Mineral Product Manufacturing
3311	Iron & Steel Mills & Ferroalloy Manufacturing
3312	Steel Product Mfg from Purchased Steel
3313	Alumina & Aluminum Production & Proc.
3314	Nonferrous Metal Production & Proc.
3315	Foundries
3321	Forging & Stamping
3322	Cutlery & Handtool Manufacturing
3323	Architectural & Structural Metals Manufacturing
3324	Boiler, Tank, & Shipping Container Manufacturing
3325	Hardware Manufacturing
3326	Spring & Wire Product Manufacturing
3327	Machine Shops Manufacturing
3328	Coating, Engraving, Heat Treating Activ.
3329	Other Fabricated Metal Product Manufacturing
3331	Ag, Construction, & Mining Machinery Manufacturing
3332	Industrial Machinery Manufacturing
3333	Commercial & Svc Ind. Machinery Manufacturing
3334	Ventilation, Heating, Air-Conditioning & Refrigerator Manufacturing
3335	Metalworking Machinery Mfg
3336	Engine, Turbine & Transmission Equipment Manufacturing
3339	Other General Purpose Machinery Manufacturing
3341	Computer & Peripheral Equipment Manufacturing
3342	Communications Equipment Manufacturing
3343	Audio & Video Equipment Manufacturing
3344	Semiconductor & Other Electronic Comp Manufacturing
3345	Navigational, & Electronic Instruments Manufacturing
3346	Manufacturing & Reproduction Magnetic, Optical Media
3351	Electric Lighting Equipment M Manufacturing

3352	Household Appliance Manufacturing
3353	Electrical Equipment Manufacturing
3359	Other Elec. Equipment & Component Manufacturing
3361	Motor Vehicle Manufacturing
3362	Motor Vehicle Body & Trailer Manufacturing
3363	Motor Vehicle Parts Manufacturing
3364	Aerospace Product & Parts Manufacturing
3371	Household, Institutional Furniture & Kitchen Cabinet Manufacturing
3372	Office Furniture (including Fixtures) Manufacturing
3379	Other Furniture Related Product Manufacturing

## Logistics

NAICS	Industry
4811	Scheduled Air Transportation
4812	Nonscheduled Air Transportation
4821	Rail Transportation
4831	Deep Sea, Coastal Water Transportation
4832	Inland Water Transportation
4841	General Freight Trucking
4842	Specialized Freight Trucking
4861	Pipeline Transportation of Crude Oil
4862	Pipeline Transp. of Natural Gas
4869	Other Pipeline Transportation
4881	Support Activities for Air Transportation
4882	Support Activities for Rail Transportation
4883	Support Activities for Water Transportation
4884	Support Activities for Road Transportation
4885	Freight Transportation Arrangement
4889	Other Support Activities for Transportation
4911	Postal Service
4921	Couriers
4922	Local Messengers & Local Delivery
4931	Warehousing & Storage

## HEALTH SCIENCES & SERVICES

The Health Sciences and Services cluster integrates two critical components of the health industry: Health sciences include activities focused on the development of a body of knowledge through scientific research in medicine, pharmacology, biology, drug discovery, genomics, and many other areas. Health services focus on the delivery of health care to patients.

### Health Sciences

NAICS	Industry
3254	Pharmaceutical & Medicine Manufacturing
3391	Medical Equipment & Supplies Manufacturing
5417	Scientific Research & Development Services

## Health Services

<b>NAICS</b>	<b>Industry</b>
6211	Offices of Physicians
6212	Offices of Dentists
6213	Offices of Other Health Practitioners
6214	Outpatient Care Centers
6215	Medical & Diagnostic Labs
6216	Home Health Care Services
6219	Other Ambulatory Health Care Services
6221	Gen. Medical & Surgical Hospitals
6222	Psychiatric & Substance Abuse Hospitals
6223	Specialty Hospitals
6231	Nursing Care Facilities
6232	Residential Mental Health & Substance Abuse Facilities
6233	Community Care Facilities for Elderly
6239	Other Residential Care Facilities
6242	Community Food, Housing, Emergency & Other Relief Services
6243	Vocational Rehabilitation Services
8122	Death Care Services

## HOUSING

The Housing cluster includes industries involved in residential construction, manufacturing of construction materials, and real estate financing, sales, leasing and management. The cluster is made up of three components: Residential Construction; Housing-related Manufacturing; and, Finance, Real Estate & Professional Services.

## CONSTRUCTION

### New Housing Construction

<b>NAICS</b>	<b>Industry</b>
236115	New Single-Family Housing Construction (except Operative Builders)
236116	New Multifamily Housing Construction (except Operative Builders)
236117	New Housing Operative Builders

### Residential Remodelers

<b>NAICS</b>	<b>Industry</b>
236118	Residential Remodelers

### Heavy Construction

<b>NAICS</b>	<b>Industry</b>
237110	Water and Sewer Line and Related Structures Construction
237120	Oil and Gas Pipeline and Related Structures Construction
237130	Power and Communication Line and Related Structures Construction
237210	Land Subdivision
237310	Highway, Street, and Bridge Construction

## Specialty Contractors

<b>NAICS</b>	<b>Industry</b>
238111	Residential Poured Concrete Foundation and Structure Contractors
238121	Residential Steel and Precast Concrete Contractors
238131	Residential Framing Contractors
238141	Residential Masonry Contractors
238151	Residential Glass and Glazing Contractors
238161	Residential Roofing Contractors
238171	Residential Siding Contractors
238191	Other Residential Foundation, Structure, and Bldg Exterior Contractors
238211	Residential Electrical Contractors
238221	Residential Plumbing, Heating, and Air-Conditioning Contractors
238291	Residential Other Building Equipment Contractors
238311	Residential Drywall and Insulation Contractors
238321	Residential Painting and Wall Covering Contractors
238331	Residential Flooring Contractors
238341	Residential Tile and Terrazzo Contractors
238351	Residential Finish Carpentry Contractors
238391	Residential Other Building Finishing Contractors
238911	Residential Site Preparation Contractors
238991	All Other Residential Trade Contractors

## HOUSING-RELATED MANUFACTURING

321113	Sawmills
321211	Hardwood Veneer & Plywood Manufacturing
321212	Softwood Veneer & Plywood Manufacturing
321213	Engineered Wood Member (except Truss) Manufacturing
321214	Truss Manufacturing
321219	Reconstituted Wood Product Manufacturing
321911	Wood Window & Door Manufacturing
321912	Cut Stock, Resuming Lumber, & Planing
321918	Other Millwork (including Flooring)
322121	Paper (except Newsprint) Mills
324122	Asphalt Shingle & Coating Materials Manufacturing
325510	Paint & Coating Manufacturing
325520	Adhesive Manufacturing
326122	Plastics Pipe & Pipe Fitting Manufacturing
326191	Plastics Plumbing Fixture Manufacturing
326192	Resilient Floor Covering Manufacturing
326199	All Other Plastics Product Manufacturing
327111	Vitreous China Plumbing Fixture & China & Earthenware Bathroom Access
327121	Brick & Structural Clay Tile Manufacturing
327122	Ceramic Wall & Floor Tile Manufacturing
327123	Other Structural Clay Product Manufacturing
327211	Flat Glass Manufacturing
327310	Cement Manufacturing
327320	Ready-Mix Concrete Manufacturing
327331	Concrete Block & Brick Manufacturing
327332	Concrete Pipe Manufacturing
327390	Other Concrete Product Manufacturing

327420	Gypsum Product Manufacturing
327991	Cut Stone & Stone Product Manufacturing
331111	Iron & Steel Mills
331221	Rolled Steel Shape Manufacturing
331421	Copper Rolling, Drawing, & Extruding
331422	Copper Wire (except Mechanical) Drawing
332114	Custom Roll Forming
332311	Prefabricated Metal Building & Component Manufacturing
332321	Metal Window & Door Manufacturing
332323	Ornamental & Architectural Metal Work Manufacturing
332510	Hardware Manufacturing
332618	Other Fabricated Wire Product Manufacturing
332722	Bolt, Nut, Screw, Rivet, & Washer Manufacturing
332913	Plumbing Fixture Fitting & Trim Manufacturing
332996	Fabricated Pipe & Pipe Fitting Manufacturing
332998	Enameled Iron & Metal Sanitary Ware Manufacturing
333120	Construction Machinery Manufacturing
333415	Air-Conditioning & Warm Air Heating Equipment
335211	Electric Housewares & Household Fan Manufacturing
335222	Household Refrigerator & Home Freezer Manufacturing
335224	Household Laundry Equipment Manufacturing
335228	Other Major Household Appliance Manufacturing

## **FINANCE, REAL ESTATE and PROFESSIONAL SERVICES**

521110	Monetary Authorities - Central Bank
522120	Savings Institutions
522130	Credit Unions
522210	Credit Card Issuing
522291	Consumer Lending
522292	Real Estate Credit
522294	Secondary Market Financing
522298	All Other Nondepository Credit Intermediation
522310	Mortgage & Nonmortgage Loan Brokers
524127	Direct Title Insurance Carriers
531110	Lessors of Residential Buildings & Dwellings
531210	Offices of Real Estate Agents & Brokers
531311	Residential Property Managers
531320	Offices of Real Estate Appraisers
531390	Other Activities Related to Real Estate
541120	Offices of Notaries
541191	Title Abstract & Settlement Offices
541199	All Other Legal Services
541310	Architectural Services
541320	Landscape Architectural Services
541330	Engineering Services
541340	Drafting Services
541350	Building Inspection Services
541360	Geophysical Surveying & Mapping Services
541370	Surveying & Mapping (except Geophysical) Services
541410	Interior Design Services

## **WHOLESALE TRADE**

423220	Home Furnishing Merchant Wholesalers
423310	Lumber, Plywood, Millwork & Wood Panel Wholesalers
423320	Brick, Stone & Related Construction Material Wholesalers
423330	Roofing, Siding & Insulation Material Wholesalers
423390	Other Construction Material Wholesalers
423610	Electrical Apparatus, Equipment & Supplies Wholesalers
423620	Electrical Appliance, Television & Radio Set Wholesalers
423710	Hardware Merchant Wholesalers
423720	Plumbing & Heating Equipment & Supplies Wholesalers
423730	Warm Air Heating & A/C Equipment & Supplies Wholesalers
423810	Construction & Mining Machinery & Equipment Wholesalers

## **RETAIL TRADE**

442210	Floor Covering Stores
443111	Household Appliance Stores
444110	Home Centers
444120	Paint & Wallpaper Stores
444130	Hardware Stores
444190	Other Building Material Dealers
444210	Outdoor Power Equipment Stores
444220	Nursery, Garden Center & Farm Supply Stores



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